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Second edition  
2005-07-15

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## **Metallic tube connections for fluid power and general use —**

### **Part 3: O-ring face seal connectors**

*Raccordements de tubes métalliques pour transmissions hydrauliques  
et pneumatiques et applications générales —*

*Partie 3: Connecteurs à joints faciaux toriques*



Reference number  
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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 8434-3 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 4, *Connectors and similar products and components*.

This second edition cancels and replaces the first edition (ISO 8434-3:1995), which has been technically revised.

ISO 8434 consists of the following parts, under the general title *Metallic tube connections for fluid power and general use*:

- *Part 1: 24° cone connectors*
- *Part 2: 37° flared fittings*
- *Part 3: O-ring face seal connectors*
- *Part 4: 24° cone connectors with O-ring weld-on nipples<sup>1)</sup>*
- *Part 5: Test methods for threaded hydraulic fluid power connections<sup>2)</sup>*
- *Part 6: 60° cone connectors with or without O-ring*

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1) ISO 8434-4 will be incorporated into the revision of ISO 8434-1.

2) ISO 8434-5 will be withdrawn once ISO 19879 is published.

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## Introduction

In fluid power systems, power is transmitted and controlled through a fluid (liquid or gas) under pressure within an enclosed circuit. In general applications, a fluid may be conveyed under pressure.

Components may be connected through their ports by connections (connectors) and conductors (tubes and hoses). Tubes are rigid conductors; hoses are flexible conductors.

This part of ISO 8434 is based on the USA standard ANSI/SAE J1453. The threads for the O-ring face seal connection are unified inch threads to ISO 263. The inch threads were not changed to metric threads to ISO 261 to allow connectors complying with this standard to be used in existing applications without requiring a change to tube or hose assemblies. Also, the thread-to-nut overtorque and seal performance have been extensively tested; to change to metric threads would require an extensive test program at considerable cost without providing any functional improvement. The threads are integral to themselves, connectors of this type match only to themselves, and other than having metric threads, no value in changing could be found. Major international companies that have used these connectors have adopted the design without noting any problems. All wrench flats are dimensioned to be used with ISO standard metric wrenches.